I. The British Background for American Medicine

Lester S. King, MD

A duration of a hundred years provides a certain stability. The century mark offers a point of rest, wherein we can pause, look back on past accomplishments, evaluate them, and look forward to the future. We may make a comparison, perhaps, with climbing a mountain and coming to a clearing. Here we can stop for a moment of retrospection and feel pleased that we have overcome so many difficulties. At the same time, on looking back, we see where we might have missed the best path and, moreover, the shape of the terrain that led us astray. We can also look upward toward an ever receding summit that we know we will never reach.

For editorial comment see p 177.

The historian, dealing with the past, describes the way that the past has brought us to where we are now. And for the historian, a century is like a cleared space part way up the mountain—a good place to survey the path we have taken.

In July 1983, *JAMA* will have completed the first 100 years of its existence. To mark the occasion, THE JOURNAL will institute a series of essays and reprints, as discussed in the editorial (p 177). However, before the actual centenary date, THE JOURNAL will publish an additional series of short essays, one each month, that will lay a historical groundwork. They are designed to make the origin of *JAMA* fall into a suitable perspective. The present article is the first of the series.

Medicine in the United States of America grew directly out of British medical traditions. In the New World, however, the environment differed so markedly from that of Great Britain that the institutions suitable for the mother country were no longer adaptive to the new conditions. By the mid-19th century, the divergences were enormous, yet the line of American development shows clearly its origins in the British system. To understand the course of American medicine in the 19th century, we must appreciate first the basic institutions that obtained in Great Britain, then the factors that led to a characteristically American profession. The medical problems in America arose from the interplay of British traditions with the environment of the New World.

In this first essay, we will describe the British system of medicine and its relations to the social problems of the day; in the next article, we will describe the specific changes that took place in the American colonies and, after the Revolution, in the new expanding country.

British medicine as it influenced America represented what I call the "two-tier system"—two main types of medical practitioners, distinguished by educational background, professional training, and social status. In the upper rank, as a class apart, was the physician. In the second tier were the subordinate practitioners—the apothecaries and surgeons. Although these two latter groups underwent separate development, I will, for simplicity, discuss only the apothecaries. The development of surgery does not add any really new principles to the exposition. A further group, however, should at least be mentioned—the various lay persons without any formal training who nevertheless dispensed medical advice, who ranged from ministers of the gospel down to complete quacks. Since this group lacked any professional identity, I regard it for the present as a penumbra of the two-tier system.

At the top was the physician. Traditionally, he was a learned man who had spent many years of study acquiring his knowledge. In the medieval universities, medicine required a long, arduous course of study, ordinarily five or six years after an already grueling training in arts. There was good reason why the physician had to be a learned man—the medical texts were written in Latin so that only the scholar, fluent in Latin, had access to the wisdom of the past and the science of the day. The length and intensity of his education set the physician apart from the community at large. Chaucer has given us a familiar

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picture of the physician before 1400:

He knew the cause of everich maladye,
Were it of hoot or cold, or moiste or drye,
And where engendered, and of what humour;
He was a verrey parfit practissour.

But as a social commentary, Chaucer added a few words about the venality of the physicians:

For gold in phisik is a cordial,
Therefore he lovede gold in special.

The learned physicians ministered to the rich. The lower orders of practitioners lacked knowledge. They might act empirically, but they did not have the insight that came from education.

In the medical hierarchy, apothecaries furnished drugs while the surgeon, as the name indicates, performed "handwork," none of which was of an intellectual character. Such men came from a lower social stratum, did not rank as educated persons, and were under the direction of the physician.

The physicians, highly educated and charging large fees, were relatively few in number and could provide only a small part of the medical needs of the community. With the social and economic changes that took place during the Renaissance, the growth of trade, and the increase in wealth, there developed a greater demand for health care, a demand that the physicians could not fill. Medical needs do not long remain unfulfilled. The apothecaries, together with a whole range of irregular practitioners, helped to fill the vacuum.

The large numbers of practitioners of different kinds and degrees greatly interfered with the prosperity of the learned physicians, who, in self-defense, formed a guild with a charter that would provide a monopoly, enforceable through the power of the state. The guild, medieval in its origin, is crucial to any understanding of 19th- or 20th-century medicine. It was an association to achieve economic betterment through eliminating competition. Ordinarily, guilds were formed by craftsmen—weavers, tailors, goldsmiths, watchmakers, butchers, grocers—who would seek a monopoly whereby their own group alone could practice their trade in a given locality. In return for this monopoly, the guild would guarantee the quality of the work. This it did by setting standards of training and performance.

All guilds, when they sought a charter to gain a monopoly, would show a touching solicitude for the public welfare and would clearly indicate the harm that would overtake the public when incompetent persons undertook skilled work. The public, for example, deserved to be protected against the meat sold by incompetent butchers, against bread baked by incompetent bakers, against cloth woven by incompetent weavers. This attitude also asserted itself among physicians when competition became severe. The public, insisted the physicians, must be protected against incompetent practitioners of medicine.

A petition to the king, in 1511, complained that the practice of "Physick and Surgery . . . is daily within this Realm exercised by a great multitude of ignorant persons of whom the greater part have no manner of insight in the same, nor any other kind of learning . . . to the high displeasure of God, great infamy to the Faculty, and the grievous hurt, damage and destruction of many of the King's Liege people: most especially of them that cannot discern the uncunning from the cunning."[1] We must remember, however, that this complaint was made, not by "King's Liege people," but by the physicians. The physicians looked to the state—ie, the King—for redress and protection. They wanted a monopoly.

After some initial regulations that proved inadequate, King Henry VIII established in 1523 the Royal College of Physicians of London, with important powers to regulate the practice of medicine. Only the members could practice as physicians in London and environs. There were two grades of membership—fellows and licentiates. Fellows controlled the policies, such as setting the standards and qualifications for the license and for the promotion to fellowship, as well as the fees to be paid. The licentiates had the privileges of practice but no voice in the councils.

The great rivals of the physicians were the apothecaries, who at one time had been united with the grocers. However, they achieved corporate independence as a separate guild in 1617, and their charter defined the duties and responsibilities. The primary duty was to furnish and compound the drugs that the physicians had prescribed, a task that required special knowledge and skills. These the apothecary learned in a seven-year apprenticeship—ie, in on-the-job training rather than through university education.

Apothecaries were enjoined to remember that their function was "only to be ye phisician's cooke"—in essence, an extra pair of skilled hands for the physician. Nevertheless, the apothecary was expressly permitted to perform bloodletting. It was only a modest step from opening a vein to lancing a boil or abscess, and another small step to pulling a tooth. These were all deemed minor procedures that did not require special scholarship or theoretical background but could readily be learned in an apprenticeship.

The apothecary soon functioned openly as a second-class practitioner of medicine who recognized definite limitations. He could perform minor manipulations. He could sell the drugs that the physician had ordered. but he could also sell directly to the consumer without the intermediation of a physician. The apothecary could offer advice. Experienced in filling the physicians' "bills" (an earlier term for prescriptions), he acquired an empirical knowledge of medical practice. If he knew what the physician had prescribed for given symptoms, he himself could recommend the same medicines when the patient complained of comparable symptoms. We can draw a rough analogy with today's druggist, whom the customer may ask to recommend something for, say, a cough.

In one important respect, the analogy holds quite strictly. Today's druggist if he should recommend, say, a cough medicine, does not charge for making the recommendation—ie, for the advice—but only for the medication, which is an article of commerce. Similarly, the apothecary of the 17th and 18th centuries did not charge for any advice he gave. He was paid only for the drugs, plus the labor of compounding them. The physician, in contrast, did not sell anything. He offered the patient only

n expert opinion regarding the diagnosis and the best mode of treatment, and he was paid for that opinion. If he was not paid, he could bring suit in court. To be sure, anyone could give advice in regard to health, but only a licensed physician could legally charge for that advice and successfully recover in court, if necessary.

The apothecary, then, made his livelihood by selling drugs. Even though he would make a diagnosis, any money he received was not for professional advice but only for drugs and medications actually sold. The price of drugs was ordinarily high enough to reward him handsomely for his efforts.

Since the apothecary did not have a license to practice medicine, he would be gravely liable if a patient died while under his care. Hence, in all serious cases, the apothecary would call in a physician to take over the responsibility. The physician would then direct the treatment while the apothecary would continue to furnish whatever medicines the physician might order.

As the apothecaries gradually took over much of the general practice, especially among the less affluent classes, they absorbed a large part of the total money spent on medical care and were formidable economic competitors of the physicians. The hostility of the latter was held in check by a vigorous system of consultations and referrals, whereby the physicians, called on to give advice in serious cases, derived professional fees, while the apothecaries would continue to provide the medications. There was a sort of symbiosis that we might regard as a covert form of fee splitting.

Ambitious young men who started out as apothecaries might want to attain a higher professional rank. This, however, required the MD degree, the outward sign of the scholarly attainment that removed a man from the stigma of trade. How to obtain the coveted degree?

In England, the MD degree, which alone could render a man a physician, could be obtained only from Oxford or Cambridge, but enrollment in these universities required not only suitable preparation but also adherence to the established religion. Dissenters, even though they had the necessary scholarly qualifications, could not matriculate. They might, however, take a medical degree at one of the continential universities, most commonly in Holland, Italy, or France. All foreign graduates, however, if they wanted to practice in London, had to become licentiates of the College of Physicians, and to do so they had to pass rather rigorous examinations.

By the 18th century, however, the situation was changing rapidly. New medical schools were established in Scotland, and the union of Scotland and England opened the latter country to the Scottish graduates. The University of Edinburgh achieved particular renown and, by the middle of the century, had become probably the leading medical school in the Western world. The Scottish universities had liberal admission policies, and this, together with the excellence of their medical teaching, proved a boon for nonconformists and for ambitious apothecaries. The career of John Fothergill provides a fine example.

Born in Yorkshire in 1712 of a yeoman Quaker family, he attended grammar school where he acquired facility in Latin. Instead of continuing his classical education in the university, he became apprenticed to an apothecary at the age of 17 years. After six years of apprenticeship, he entered the University of Edinburgh, in 1734. He remained for two years and received the MD degree in 1736. Then he continued his medical studies by enrolling in St Thomas Hospital in London, a step that would correspond to our present-day residency. He thus received an outstanding medical training, both practical and theoretical, and he became one of the leading British physicians of the 18th century.

The medical schools in Scotland permitted many young men to combine practical apprenticeship with university medical training and thereby earn the MD degree. For conscientious students, the opportunities were unrivaled. Unfortunately, there were certain problems. The Scottish universities might give degrees in absentia, requiring only letters of recommendation, a thesis, and payment of fees. The authorship of a thesis might not be too closely examined, and letters of recommendation were easy to come by. By itself, a Scottish degree was no guarantee of competence. It might or might not indicate sound training and education.

After the Scottish medical schools were established, the number of physicians increased strikingly. In the half century from 1751 to 1800, only 246 physicians were graduated from Oxford and Cambridge, while in the same period the Scottish universities granted 1,598 medical degrees. The divergence continued to increase. Within the next 50 years, the population of Great Britain doubled, yet the number of Oxford-Cambridge graduates had increased by only 10%, whereas graduates from the Scottish medical schools increased by some 300%.[2]

The times, however, were changing. The rise of the middle class and the increase in scientific knowledge were affecting the earlier attitudes, and the status of the apothecary rose gradually but steadily. This slow transformation had peculiar relevance for American medicine. One important connection lay through the institution known as the dissecting academies.

London was the medical center of England. Here were the leaders of the profession; here, in the great hospitals, the students could gain vast clinical experience. Yet prior to the 1830s London had no university, no institution of learning that could grant the MD degree. The opportunities to learn medicine and surgery were essentially practical. The rich teaching material in the London hospitals offered no direct scope for the systematic study of anatomy, physiology, medical theory, and what would eventually be called the "medical sciences." There gradually developed, however, further ways of acquiring medical knowledge through so-called dissecting academies.

William Hunter was indeed an innovator when, in 1746, he opened a private school in London for the teaching of anatomy. Later his brother John, destined to become even more famous, joined him. The school, known from its location as The Great Windmill Street School, was the forerunner of many others. In general the teaching of anatomy was the major concern, but in some schools additional subjects might be added, such as chemistry and materia medica, especially valuable for those who sought

licenses in the Society of Apothecaries.

These private academies, I suggest, served as halfway houses, intermediate between an apprenticeship and formal instruction at a university medical school. A preceptor engaged in active practice had neither the facilities nor, in all likelihood, the knowledge to instruct his apprentices in anatomy, to say nothing of other, more theoretical subjects. The academies, however, could offer excellent specialized instruction. Since the teachers were as a rule extremely well qualified, the instruction could also partake of a postgraduate character, appealing to those who already had studied anatomy and wanted even better training.

We can regard the academies as means for imparting technical knowledge in concentrated form. They flourished where there were no universities. When properly chartered universities came into being, the academies withered: after the University of London became well established in the 1830s and teaching improved in the hospitals, the private academies disappeared.

Privately established and run for profit, these schools filled an important need. While the private schools had nothing to do with the cultural advancement that we traditionally associate with a university education, they did contribute substantially to the technical education of the practitioners. By offering highly concentrated instruction, they served many of the functions of a medical school and, as we shall see, greatly influenced the form of the North American medical schools.

Eventually, the apothecaries received full formal recognition that abolished the distinction between them and the physicians. This emancipation is part of specifically British medical history, but the advances made by 1815 are definitely relevant to American medicine. In that year Parliament, after long agitation, enhanced the status and privileges of the apothecaries. Of particular interest were the requirements that the examiners set for the apothecary's license. Candidates were expected to have a "competent" knowledge of Latin; they had to give evidence of having attended "two courses of lectures on anatomy and physiology, two on theory and practice of medicine, one on chemistry and one on materia medica, of six months' attendance on the practice of a public hospital, infirmary or dispensary; and of five years' apprenticeship to an apothecary."[1] These requirements for British apothecaries in 1815 will relate to American standards for physicians during the first century of the republic.

Particularly important for American medicine was the elitist tradition with its two-tier system; the physician with the university education and the MD degree; and the apothecary, trained by apprenticeship and lacking the MD degree. Also important was the opportunity to pass from the lower status to the higher through appropriate study.

Relevant here is the place of a liberal education for the practitioners of medicine. The graduate of Oxford or Cambridge, who had an arts degree before studying medicine, was considered the cultured gentleman. The ambitious apothecary who later obtained the MD degree at a Scottish university but whose university exposure was restricted to the actual medical curriculum, without significant background in arts, was not likely to be broadly educated. On the other hand, he might have had considerably better professional instruction. We have here the early stages in the schism between medicine as merely a technical discipline and medicine as a subject where technical mastery is only one phase of a broad humanistic profession.

Of crucial importance is the way the economic well-being of the elite physicians was adversely affected by competition from below—from apothecaries, the irregulars, and the quacks. The physicians sought redress through the formation of a guild and the institution of licensure. They tried to rule on the questions: What constitutes medicine? Who will control it? and By what means? But any effort at monopoly brings out counter-struggles—competing groups seek to erode the monopoly and make way for their own members. In Great Britain, the College of Physicians and the Society of Apothecaries engaged in just such a power struggle, each side seeking to gain advantage through legislative enactments. In Great Britain, the actual maneuvering accorded with local political realities that were not relevant to this country and need not be considered here. But the principles involved—the effort to improve economic conditions through monopoly and the influences, pro and con, that were brought to bear on the legislative bodies—concern the United States as much as Great Britain.

The next essay in this series will study the way that the factors operative in Great Britain were modified by new cultural and environmental aspects of the Americas.

Bibliographic Note

Readers who wish to go more deeply into the subject will find abundant material in Lester S. King's *The Medical World of the Eighteenth Century* (Chicago, University of Chicago Press, 1958); Charles Newman's *The Evolution of Medical Education in the Nineteenth Century* (London, Oxford University Press, 1957); and Sir George Clark's *A History of the Royal College of Physicians of London*, vol 1 (Oxford, the Clarendon Press, 1964). These few secondary sources will lead the reader to the major primary sources. The numerous biographies of important physicians—Thomas Sydenham, Thomas Willis, Richard Mead, William Withering, John Fothergill, John Hunter, and William Hunter, to name only a few of the most readily available—will provide greater depth to the background.

1. King, op cit, pp 1-2.
2. Robb-Smith AHT: Medical education at Oxford and Cambridge prior to 1850, in Poynter FNL (ed): *The Evolution of Medical Education in Britain*. Baltimore, Williams & Wilkins Co, 1966, pp 19-52.
3. Newman, op cit, p 74.

II. Medical Education: The Early Phases

Lester S. King, MD

When the early colonists came from England, the medical men who accompanied them belonged to the lower part of the professional spectrum. They were, for the most part, apothecaries and surgeons, more skilled in practice than in theory. After many decades, however, as life in the colonies became more attractive, better-trained men, often with university education, joined the immigrant ranks.

In addition to those who had had some formal medical training in the mother country, the colonial practitioners included lay persons who had acquired a smattering of knowledge and whose ministrations were sought by those with no other recourse. In isolated communities there might be no other than self-appointed healers, whose good faith and intentions we do not doubt, whatever reservations we may have about their competence. From this latter group, there was a transition to the inevitable quacks and frauds.

Ministers of the gospel often provided medical assistance, especially in outlying communities. In the 18th century, the standard medical texts were not then beyond the comprehension of the intelligent layman, and in the smaller communities the ministers, ordinarily the best-educated persons, could read the texts and treat diseases. Even in Boston, ministers dabbled in medicine, with Cotton Mather (1663-1728) as an outstanding example. He made effective pronouncements on medical affairs, and he was instrumental in promoting the practice of inoculation for smallpox.

In this overall hierarchy, there was only a vague line between those who adhered to orthodox medical traditions and the irregulars who relied on various types of inspiration. Since there was no strong tradition of medical education in the colonies, there was none of the discrete class separation I have called the "two-tier system."

The immigration of medically trained personnel did not keep up with the needs of the New World, and the early practitioners, trained abroad, had to transmit their knowledge to the native youth. The transmission necessarily took the form of long-term apprenticeship. The better-educated preceptors would attract the most capable apprentices, who in turn would eventually become leaders. The poorly trained preceptors could offer only poor training, and their pupils would be mediocre at best.

Meanwhile, liberal education had gotten a vigorous start in the colonies. Harvard College and the College of William and Mary were founded in the 17th century, and Yale in 1701. By midcentury numerous other colleges were flourishing. Ambitious young men could readily obtain a liberal education that would make them more astute practitioners and would also fit them to go abroad to enlarge their medical education. In the colonies the rudiments of medicine were obtained through apprenticeship, but the MD degree required study in Great Britain or on the continent. Leiden or the Scottish universities were most commonly attended by the colonials who did study medicine abroad.

In the larger communities such as Philadelphia, Boston, or New York, the better-trained practitioners were quickly recognized, but the public esteem did not rest on any formalized qualification. In the popular regard, any practitioner of medicine was a "doctor," and the general public did not distinguish those who actually had an MD degree obtained through university study abroad, from those less well trained who corresponded to the British apothecary.

Particularly important in colonial medicine was John Morgan (1735-1789), whose career illustrates the training achieved by the more capable and ambitious, and who also founded the first medical school in the colonies (1765). He helped to focus attention on the growing problems of elitism.

Born in Philadelphia, Morgan was apprenticed at the age of 15 years to Dr John Redman, one of the outstanding colonial physicians of midcentury. The apprenticeship lasted six years. During this time Morgan also attended the College of Philadelphia, a liberal arts institution, and for part of the time worked at the Pennsylvania Hospital as a pharmacist. After serving as a military surgeon for four years, he went abroad for further study. In London he walked the wards of St Thomas Hospital and also studied anatomy with William Hunter. Then he enrolled in the University of Edinburgh, where he received his MD degree after two years. On his return to Philadelphia, he immediately took his place as one of the leading physicians in the community. Bell's splendid biography gives an

From the Morris Fishbein Center, University of Chicago.

excellent picture of the man and his times.

Morgan wanted to establish in the colonies the two-tier system that clearly distinguished the university-trained physician from the apothecary who had only apprenticeship training. An apprentice could gain practical experience, but for theory and scientific background he was dependent on whatever books a preceptor might have in his personal library. The results, insisted Morgan, were unsatisfactory at best. Only the man with a thorough knowledge of medical theory could understand the phenomena of disease and the causes behind the phenomena, a knowledge that could be soundly acquired only by formal education.

To transplant British conventions to America, Morgan wanted to establish a medical school wherein students could learn the subjects basic to medicine—anatomy, materia medica, and chemistry were the most important—together with the theory and practice of medicine. Such a course of study, thought Morgan, would convey an understanding of disease and the knowledge of causes. He successfully established the first medical school in the colonies, in 1765 (originally with only a two-man faculty, later much increased).

In 1767 the King's College Medical School opened in New York City, with a faculty of six, and in 1782, a further medical school at Harvard, with a three-man faculty. By the turn of the century, additional schools were established at Dartmouth College and at Transylvania University in Kentucky. The levels of instruction may not have been very high—certainly not comparable with that received in Edinburgh—but at least the medical students could receive the coveted MD degree without crossing the Atlantic. The practical skills learned during an apprenticeship could at least be supplemented by formal training in anatomy and medical theory.

Morgan, trying to establish in America the two-tier system that obtained in Great Britain, tried to separate the functions of the physician from that of the apothecary or surgeon. The physician was a thinker, concerned with the diagnosis of disease and the directing of treatment. These functions, he thought, should be kept separate from those of the apothecary who, as a tradesman, should be paid for the medicines he provided. The physician, a professional man who gave advice, deserved a higher status and suitable economic rewards appropriate for his responsibility. Professional status and trade were not compatible. Hence, the physician should not purvey drugs but should leave that activity to the apothecary.

Morgan also wanted to establish a Medical Society that, like the Royal College of Physicians in London, could dictate standards and act as a licensing and disciplinary body for the medical practitioners. The attempt to form such a society that could create and enforce standards (with Morgan, of course, as the directing spirit) came to nothing. A scheme that could succeed in a mature and stable social environment, as in Great Britain, had no chance whatever in the unsettled fluctuating conditions found in the colonies. The effort, however, was a harbinger of future struggles that would emerge as social and economic circumstances changed. At that time, the social setting in America would not accept a blatant division into a medical aristocracy and a residual class with lower status. The history of medicine must take account of social movements and economic trends, just as it does the discoveries in science and the growth of ideas.

Morgan's unsuccessful program, offered in the 18th century, has considerable significance for the later development of medicine. How much central control of medical activity is desirable? Who should exert it? In Great Britain, a monopoly founded on the guild system was an accepted mode of meeting certain difficulties. Not so in the New World—at least at that time. Class struggle was much more fluid, but there were no established traditions that could buffer various rivalries. The special environment in America had to create new solutions to old problems.

By the late 18th century the situation found in 16th-century England seemed to be repeating itself in the British colonies—or at least in several of them. The better-trained practitioners were suffering from the competition of the poorly trained and the quacks. The complaints and the suggested remedies came not from the allegedly abused public but from the medical men themselves.

In 1760, legislation regulating the "practice of Physic and Surgery in the City of New York" started with a relevant preamble:

> Whereas many ignorant and unskilful persons in physic and surgery, in order to gain subsistence do take upon themselves to administer physic and practice surgery in the city of New York, to the endangering of the lives and limbs of their patients, and many poor and ignorant persons who had been pursuaded to become their patients, have been great sufferers thereby. . . .

In 1763, a petition to the general assembly in Connecticut lamented that

> Nothing has been Publickly done to Distinguish between the Honest and Ingenious Physician and the Quack or Emperical [sic] Pretender by reason of which Imposture and Imposition has been and is still but too Commonly practiced among us to the great injury of the People as well as the Disparigment [sic] of the Profession.

The history of medical licensure is complex. Each colony, and after independence, each state, could make its own rules—if any. Should there be examinations? Who would conduct them? How much preparation would a student need to qualify for the examinations? What penalties would attach if the laws were violated? Each state had complete autonomy, and the laws of any one state were not at all binding on any other. For our purposes the history of licensure in New York is especially important, for this was a pivotal state in the problems of medical ethics, medical education, and the formation of the American Medical Association.

In New York, the early legislation on medical practice applied only to the city of New York. The first statewide law was enacted in 1797. According to its provisions there were no examinations. A student, to get a license, had to present certificates from one or more "reputable" physicians, who attested that he had studied for four years and was well qualified. Since the attestation was made by oath, we may assume that the quality of the training was taken seriously. For students who had graduated from a "literary college," only three years of medical study were

required, presumably because such a youth could learn more quickly than one unused to the discipline of study. Anyone who held the degree of bachelor or doctor of medicine (ie, who had been graduated from a "medical college") could practice merely by appropriately recording his diploma (which represented the best evidence of competence). In 1797, we must realize, there were only three medical schools in the entire country—Pennsylvania, Harvard, and King's College (the medical college at Dartmouth was in the process of being founded). They all enjoyed high standing, which carried over to their graduates.

In 1806, the legislature changed the law and introduced new provisions. The power of granting the license to practice was placed in the hands of the physicians, through the mechanism of county organizations. In each county the physicians were authorized to form a local society and appoint a board of censors to pass on the qualifications of candidates. The censors would ordinarily conduct oral examinations before granting the license. A license from any one county would be valid in the entire state.

Any person who practiced without a license was denied recourse to the courts to collect unpaid charges for services. He could not sue to collect fees. The next year the legislature established monetary fines in addition. Significant for the later course of medicine was a specific exemption for those botanic practitioners who, although they did not have a license, treated patients with homegrown herbs and roots. Adherents to this special mode of practice would not incur penalties if they prescribed roots or herbs grown in the United States.

In 1818 and 1819, small but significant changes were made. A candidate, we have seen, had to have studied with a preceptor for four years. One year was deducted if the student had attended medical lectures at a properly incorporated medical college. The role of formal medical academic instruction was thus recognized as an addendum to the preceptorship. Attending formal lectures at a medical college would enrich the training that a student would receive during his apprenticeship, and the theoretical knowledge thus derived seemed to be equivalent to a year's further practical experience.

I would point out that these educational requirements for physicians were considerably less stringent than those that the apothecaries had to meet in Great Britain, according to the Act of 1815 (mentioned last month). In the United States, some didactic training in addition to the apprenticeship was recognized as important, but not important enough to be required as preparation for practice.

In the United States, once a man was legally in practice, the laws did not recognize any difference in privilege or standing between those who had the MD degree and those who did not. Morgan had tried to institute such differences but without success. To be sure, those who held the MD degree found it easier to get a license, for ordinarily they were exempt from the examinations that their less educated colleagues had to take, but the degree did not confer any other privilege. In the eyes of the law, American regular medicine was strictly a one-tier system.

At this point we may pause to note two not unrelated problems that were becoming more and more pressing. First is the great expansion of cults and irregular practitioners, and second is the decline in the quality of medical education. As we shall see, these two trends and their interactions have direct bearing on the formation of the AMA. The development of cults we will postpone to the next essay in this series. In the present installment, we will study the relationship of the apprentice system and the medical schools and the decline in both modes of instruction.

The apprenticeship is a highly satisfactory mode of transferring skill from master to pupil, one that had worked well for centuries in the various manual trades. Medicine, however, had the tradition of a profession rather than a trade so that the apprenticeship, excellent as it might be for printers, goldsmiths, and butchers, left much to be desired for optimal training in medicine. So long as the social organization was relatively primitive and offered no other mode of instruction in medicine, the apprenticeship necessarily served, even though it was not entirely consistent with the notion of medicine as a profession.

We can study the problems from different points of view—those of the preceptor, the apprentice, and the public. The preceptor, ordinarily, would welcome the apprentice. For one thing, such an arrangement was a source of income. Although the fees were subject to negotiation, a charge of $100 a year was considered reasonable. In large communities, leading physicians might have several apprentices who would thus furnish a substantial income. Then, the apprentice, who ordinarily lived with his preceptor, served as a source of cheap labor. Apart from performing routine professional duties such as preparing drugs and cleaning instruments or caring for the preceptor's horse, he might be called on to perform household chores quite divorced from medical instruction. Furthermore, a preceptor could derive prestige in the community from having an apprentice, for this implied skill and knowledge that would add to the esteem in which the practitioner might be held.

The apprentice derived benefit, for he had a means of learning a superior sort of trade, one that merged with a professional status. An apprenticeship in medicine could be an important step in social upward mobility as well as a means toward a comfortable living. To be sure, the fees for an apprenticeship might involve considerable sacrifice on the part of the youth's family, but the result was considered well worth the cost.

However, there were many subtle, cumulative drawbacks to the apprentice system that affected not so much the teacher or his pupils as it did society as a whole. There was no control over the quality of instruction a youth might receive. An able and conscientious youth, working with an able and conscientious preceptor, could become a competent practitioner. However, the preceptor himself might be poorly trained and the apprentice lazy, and yet after a "training" period of three or four years the preceptor would assert that the youth was "qualified" to go out in practice. Then a new and poorly trained practitioner would be foisted on the community. Society suffered.

Another severe drawback was the inability of the apprentice system to keep pace with new advances in medicine. In the first quarter of the 19th century, enormous progress took place, especially in France. There were new conceptual advances, such as the anatomic researches of Bichat. The concentration of patients in hospitals and the extensive pathological studies led to new concepts of diseases, as in tuberculosis. New techniques of examination, particularly the auscultation developed by Laennec, led to new diagnostic acumen. With the apprenticeship system alone, there was no way that the new techniques and the new knowledge could be disseminated through the whole corpus of practitioners.

Actually, from the large eastern centers many ambitious physicians went to France to study. On their return they would enjoy enhanced status as practitioners but in addition would ordinarily teach in the medical schools or in private clinics, thus serving as a focus for disseminating the new knowledge. At least in the earlier years, medical schools enjoyed a reputation—generally well deserved—as centers of worthwhile instruction and attracted increasing numbers of students. However, the very success of some medical schools led to a generalized deterioration.

Originally, the medical school was a supplement to the apprenticeship, supplying theoretical and scientific background to the practical experience. The student was supposed to have at least a three-year practical training, but during this time he could take a three or four months' course at a medical college to acquire the theory that the preceptor could not furnish. To get an MD degree the student would need to take courses in two successive years and pass the required examinations.

We can now appreciate the way in which three discrete factors combined virtually to wreck the educational system. In the first place, running a medical school was profitable. Although the only income came from student fees, the expenses were low and the funds left over were divided among the faculty. To start a medical school, a group of physicians had to get a charter from a state legislature. Although difficulties might occur, these could usually be overcome in one or another way. The number of medical schools grew from five in 1800 to 38 in 1849. They were proprietary in nature, run for profit, and they engaged in unrestricted competition. Since the schools competed with each other for students, they lowered the standards of admission in the struggle to increase enrollments.

The possession of a medical degree offered a great competitive advantage to the prospective students. There were, we recall, three classes of practitioners contending for the paying patient. The cultists, whom we will discuss in detail in the next essay, were the principal competitors of the regular practitioners. The latter, to protect their economic well-being, sought and received powers to conduct examinations and determine the fitness of candidates to practice medicine in the communities under their jurisdiction. In these regulations, however, the legislatures invariably gave special privileges to men who held the MD degree. The degree itself was deemed evidence of competence, and those who held it could practice without taking examinations. They did not need to subject themselves to the scrutiny of the practitioners already in the community—an "old guard" that would regard newcomers with hostility, or at least suspicion. Hence, the holders of an MD degree would stand in a much safer position than did a practitioner who had to take examinations.

The MD degree was thus becoming an economically desirable object. Prospective physicians wanted it, and established physicians were competing to supply it. There was, however, one great difficulty—the requirement that a student should study medicine for three years. If this period could be shortened, the schools would be in a much stronger position to attract students. The requirement of three years of study was easily circumvented. Complaisant practitioners might write false statements, or schools would accept a student's word without documentary evidence, or the schools might not even make inquiry but would simply accept all candidates, with matriculation and graduation just as if the requirements had been met.

We can be quite moralistic about this and call it laxity of moral fiber, a rejection of professional standards, and a betrayal of medical honor, or we can be purely naturalistic and see the situation as a reaction of normally greedy individuals in an unregulated competitive environment. Whenever a desirable object is hedged in with certain restrictions, human ingenuity will find ways to circumvent the restrictions.

Although in regard to medical practice the modes of circumvention severely affected medical education, we must not regard the events in a simplistic manner. The total situation was enormously complex, with innumerable factors interacting, with intensity varying in different places and times.

In the next essay we will discuss some major sects and the interactions between them and the regular practitioners.

Bibliographical Note

Martin Kaufman's *American Medical Education: The Formative Years* (Westport, Conn, Greenwood Press, 1976) gives a survey of American medical education. For more information on John Morgan and the first medical school in America, see Witfield Bell, Jr: *John Morgan: Continental Doctor* (Philadelphia, University of Pennsylvania Press, 1965) and George W. Corner: *Two Centuries of Medicine: A History of the School of Medicine of the University of Pennsylvania* (Philadelphia, JB Lippincott Co, 1965). The question of apprenticeship is discussed in George W. Corner: "Apprenticed to Aesculapius: The American medical student, 1665-1965" (*Proc Am Philos Soc* 1965;109:249-258). An overall view of medical licensing is found in Richard H. Shryock's *Medical Licensing in America* (Baltimore, Johns Hopkins University Press, 1967). The quotations come from Charles J. Bartlett, "Medical licensure in Connecticut" (*Conn State Med J* 1942;6:182-190) and Charles B. Coventry, "History of medical legislation in the State of New York" *NY J Med* 1945;4:151-161). The works cited give abundant references to both primary and secondary sources.

III. Medical Sects and Their Influence

Lester S. King, MD

A sect comes into existence through two distinct yet related steps. First, some one person, not satisfied with traditional beliefs or actions, propounds new beliefs or ways of doing things. Second, through force of personality, together with favorable environmental conditions, he persuades other persons to follow him, to accept his beliefs and procedures. A sect is thus a splinter group, leaving tradition and following some definite leader on a new course. In medicine, sects have been numerous indeed, but in the first half of the 19th century the two most important were those founded by Samuel Thomson and Samuel Hahnemann.

Samuel Thomson (1769-1843), born in a frontier region of New Hampshire, grew up on a farm in severe poverty. He had only the most minimal education, yet he did have a long-time interest in plants and their medicinal properties, an interest that eventually determined his life work. In sparsely settled areas, herb doctors were a recognized category of healers who made no pretense of regular medical qualifications but tried to cure illness by prescribing herbs and roots. Young Thomson dabbled with such remedies and had a special interest in the plant *Lobelia*, which acted as an emetic.

When he was about 21 years old he had unhappy experiences with the regular physicians. His mother died under their care, with a diagnosis of "galloping consumption." He himself, although allegedly suffering from the "same" condition, claimed to have restored himself to health with botanical remedies. Within a year a further experience completely destroyed his confidence in the regular profession. His wife had become very ill after childbirth, seven regular physicians helped her not at all, and in despair he dismissed them all. He called in two root doctors, who promptly cured her.

Over the next several years Thomson treated his family and neighbors with herbs and finally, in 1805, gave up his farm to become an itinerant herb doctor. He developed a theory to explain the success of his treatments. By thus providing a rationale he created a "system" analogous to those of dominant medical theorists of the 18th (and 19th) centuries. Thomson's theory was extremely simplistic, deriving from ancient concepts that had had a residual vogue in the 16th and early 17th centuries but had no relation to the sciences of the late 18th and early 19th centuries. He believed that four elements—earth, air, fire, and water—comprised all animal bodies and that heat was the cause of life and motion. Disease resulted from insufficient heat and would be countered by measures that would restore natural heat. Treatment began with steam baths that would promote massive sweating and make the body receptive to botanical therapy. Suitable medications consisted of "hot" botanicals, of which red pepper was the classic example, and vegetable purgatives and emetics. *Lobelia*, the plant in which he had long been interested, held a special position, but he also prescribed series of other herbs.

In large part, regular medical practice depended on bloodletting and on a few drugs, especially calomel and tartar emetic. Thomson condemned bloodletting and rejected the chemical remedies. Like many modern health enthusiasts, he capitalized on "natural" remedies, on plants with medicinal properties. Simple physical agencies like sweat baths were still "natural." Actually, his own regimen could be just as heroic and violent as that of the most extreme regular practitioner, but clever propaganda had a great effect in disguising this fact.

Thomson built up enormous areas of influence, for he capitalized on various types of discontent. The actual medical care that the regular physicians had provided was not strikingly successful. In the rural and frontier regions regular doctors were relatively few, the treatments disagreeable and expensive, and the results not conspicuously

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better than those achieved by the irregular practitioners. Yet the regular doctors were trying to eliminate competitors—irregular practitioners such as herb doctors—and to gain monopolistic privileges through legislative action. With a passionate conviction Thomson felt that his own system of cure was more effective than that of orthodox medicine, and he tried to spread his conviction widely.

Perhaps the most important feature of Thomsonianism was its successful struggle to attain legitimacy, ie, the legal right to practice. The progress within three decades was remarkable, and the result was achieved largely by the driving personality of Samuel Thomson himself.

Early in his practice, when one of his patients died, Thomson was indicted for murder but acquitted. After the acquittal he intensified his efforts to establish his doctrines. In 1813 he obtained a patent for his methods, and with vigorous salesmanship he sold to individuals the rights to use his system of healing. Those who bought his methods were encouraged to form "friendly botanic societies" for mutual support and exchange of information. Thomson wanted his system to become a "do-it-yourself" technique, a home-and-family method of cure in which everyone could share. He appointed many agents and managers around the country who would help with the societies and sell the drugs that the system required.

Herbal medicine, long a marginal type of irregular practice, Thomson turned into a powerful force that spread rapidly. His network of agents provided a fairly efficient tool for popularizing and spreading the movement. For the year 1833, according to Berman,[1] he had a total of 137 agents, of whom 41 were in Ohio alone, 29 in Tennessee, 21 in Alabama, but only 14 in all of New England. Thomsonianism was especially popular in the West (ie, our Midwest) and South. Thomson and his agents used extensive advertising and publicity, coupled with attacks on the regular medical profession for their bloodlettings and chemical poisons, for their monopolistic practices, their efforts to hold and retain special privileges, and their rapacity and high fees. All this propaganda was remarkably effective.

The charges were not without some truth. Medical practice, of course, varied widely with the environment. Urban centers, rural communities, and the frontier all had different standards, with different levels of education and sophistication. Within any given environment the practitioners varied in their abilities. While some regular practitioners were outstandingly good, many, perhaps most, had relatively poor training and little native ability. Their results were no better than those of the Thomsonians and in some cases worse. However, the regular practitioners had a protective legal umbrella that gave them alone the right to practice medicine. Particularly important was the privilege of suing in court to recover professional debts. Irregular practitioners had no legal right to collect in court any professional debts, and in addition might face numerous penalties for illicit practice.

In the 1820s and 1830s, the whole concept of special privilege came under heavy political attack. This was the era of so-called Jacksonian democracy, the era of the "people," who resented anything that savored of special privilege. The movement coincided with western expansion and increase in population, with a considerable polarization of the West against the East, agriculture against commerce, the poor against the moneyed classes and bankers. This great economic and social ferment had its effect on medicine, particularly on the laws affecting the right to practice.

During the 1830s, while Thomson was spreading his doctrines and amassing power, schism was already appearing among his followers. Thomson wanted to create an empire of which he would be undisputed head, but many of his followers had other ideas. Wooster Beach, in 1830, founded an offshoot called "Eclecticism" that eventually replaced the original concepts of Thomson and became a major medical sect. Many of the better-educated and more forward-looking Thomsonians wanted to establish medical schools to teach botanical medicine as a scientific discipline, with a more formal and better elaborated theoretical foundation. They also wanted to have dispensaries that would treat according to botanical principles. Thomson had opposed these activities, which seemed to him merely to ape the methods of the regular physicians whom he hated, but he could not control the course of events. Numerous botanical schools did receive state charters, and the whole movement thereby took on an enhanced status.

Botanical medicine became a powerful counterforce to regular medicine and was largely instrumental in securing the repeal of restrictive regulations that granted privileges to regular medicine while denying them to special sects. In New York, for example, the botanical cult had amassed petitions with more than 50,000 signatures to support the demands for full recognition. In 1844 the New York legislature, instead of specifically recognizing the botanical movement, did something even more radical: they removed all disabilities from those who did not have a license. They explicitly repealed any previous laws that had granted special privileges to the regular physicians. The license was thus rendered superfluous, and any person might not only treat the sick but could collect pay for services rendered. New York, along with virtually all other states, entered the era known as "free trade in medicine." Anyone could practice medicine, regardless of his training or qualifications. When New York rescinded the special privileges previously accorded to the regular physicians, the repeal triggered a movement that led directly to the formation of the American Medical Association. However, before we discuss this event, we must consider another cult, homeopathy.

Homeopathy, founded by Samuel Hahnemann, had an origin and course quite different from botanical medicine. Samuel Hahnemann (1755-1843), born in Meissen, Germany, was a well-educated physician who had received his MD degree in 1779. However, despite his great scholarship he was unable to establish a successful medical practice, and he traveled from one locale to another, supporting himself largely by translating foreign books into German. In 1790, when translating Cullen's *Materia Medica*, he found the germ of his own special doctrine, that "like cures like" (*similia similibus curantur*). The evidence and the reasoning are significant for

ıe understanding of his concepts.

In the late 18th century, "fever" was a major disease. he criterion of a fever lay not with a heightened body mperature, but with an increased pulse rate. Although ıis may seem absurd to the modern reader, it had its ıstification in contemporary knowledge and doctrine. fter reading Cullen, Hahnemann performed an interest-ıg experiment on fever. Cinchona bark—quinine—was an ffective remedy for "intermittent fever" (malaria). When ahnemann, entirely healthy, dosed himself with cin-ıona, a series of symptoms developed—palpitations, ıpid hard pulse, prostration, flushing, thirst, "all the rdinary symptoms of intermittent fever but without the ctual chill."[2] These symptoms, which he interpreted as ıose of a fever, regressed when he stopped taking the rug.

The experience led him toward his special doctrine: a ıedicinal substance (quinine) that cured a fever (malaria) ould also cause a fever—or at least, certain symptoms ıat he *called* a fever. His conclusion was really based on a ingle case—himself—but it was convincing. The insight hat he derived from his experiments with cinchona he xtended widely to include other substances, although on he most scanty evidence.

A second major premise of his doctrine was the belief hat two diseases would not coexist, but that one disease ould drive out another. Hahnemann believed that a isease artificially produced by drugs would drive out or uppress a preexisting naturally occurring disease, pro-ided the new disease was similar to the old. These two eatures, however absurd they may seem today, were not bsurd in the context of 18th-century thought.

The third major feature of homeopathy was the insis-ence on minute doses. This aspect was actually a elatively late development that became prominent only bout 1799. However, the concept soon developed into the xtravagant doctrine of multiple decimal dilutions, even to he 20th or 30th power, with the claim that the greater the ilution the more effective the remedy. Hahnemann laborated his doctrines with a concept of vitalistic hysiology.

Hahnemann's system gradually attracted adherents as vell as arousing vigorous opposition. Even while home-opathy was gaining recognition, he elaborated his doc-rines in rigid dogmatic fashion, reaching fanciful lengths hat suggest to us a departure from the norms of sound hinking and the realities of life. The climax of his eculiar thinking came in 1828, when he published his text n chronic diseases, which he attributed to infection with scabies, infection poorly treated by the regular (or "allo-pathic") physician. However, even his most fervent sup-porters could hardly accept this pronouncement. It seems ikely that in his later life Hahnemann was a victim of paranoia. Nevertheless, by the 1820s he already had a considerable and influential following, and by the 1830s his mode of practice had achieved considerable popularity in many European circles.

Homeopathy first came to America in 1825, in the person of Hans Gram. Born in this country of Danish immigrants, Gram had gone back to Denmark to study medicine. Exposed to homeopathy and finding it appealing, he returned to the United States and settled in New York City. Here he practiced homeopathic medicine and attracted many disciples. Other homeopaths came from Europe, and many native physicians became converts. The growth of the entire movement in America has been well described by Kett and Kaufman.

Hahnemann's doctrines became disseminated in the United States rather slowly. In 1830, an essayist in the *American Journal of Medical Sciences* reviewed three German books on homeopathy. He indicated that the "somewhat peculiar" principles had aroused attention in Germany but were little known in this country, and "perhaps indeed have not been even heard of by many." Hence, the author provided an exposition and critique, rejecting the doctrines but expressing the criticism in temperate language and allowing some merit to ideas. The reviewer objected particularly to the hasty generalizations and the neglect of negative or contrary evidence. In large part the critique rested on the logical inadequacies of the formulations, although such terms as "fanciful" or "glaring sophistry" or "irreconcilable with truth and reason" indicated a certain amount of heat.[3]

The most devastating early attack on homeopathy came from Oliver Wendell Holmes, who in 1842 wrote a long essay whose title indicates its tenor: "Homeopathy and Its Kindred Delusions." The first part discussed the "kindred delusions"—weapon salve, tar water, Perkins' tractors, and animal magnetism. The second and longer part thoroughly demolished the claims of Hahnemann. Holmes was a brilliant literary figure whose poetry, novels, and chatty essays earned him a permanent place in American literature. His criticisms of homeopathy, enlivened by great wit, have two major features. With considerable ridicule he dissected the theoretical absurdities in homeopathy. He also attended to the actual evidence that the homeopaths had offered to support their claims and attacked its validity. By the 1840s there was a growing critical awareness of the difference between good and bad evidence. What *are* the facts? How can you identify a valid statement from a mere fanciful assertion? These problems, so crucial for the understanding of "scientific medicine," emerged in some (but not all) of the criticisms of Hahnemann and his doctrines.

It is interesting, however, to note some of the comments that appeared in the medical literature from 1841 to 1845, before the formation of the AMA. Those who first practiced homeopathy were physicians who embraced the new doctrines in preference to regular medicine. We have, for example, testimonials of physicians who claimed that with homeopathic regimens their results were better than when they practiced "allopathically." Other writers, opponents of the sect, believed that such apostates were acting from purely venal motives rather than intellectual conviction. One author wrote, "Ridiculous and farcical as we regard the whole subject of Hahnemannianism, we have a far greater contempt for those of our allopathic brethren who are so mean as to stoop to this miserable management for the sake of . . . a little more money."[4]

While the extensive attacks led some regular physicians to believe that homeopathy was "dying," nevertheless the number of sectarian practitioners was increasing. Although the concepts were devastatingly ridiculed, the sect still grew. If the doctrines were so bad, said one homeopath, they should die a natural death and did not

need long detailed essays for "putting down a mere phantom of the imagination . . . an *ignis fatuus* of disordered reason."[5] Indeed, the attacks that emphasized the absurdities were singularly ineffective. The physicians who had adopted homeopathy pointed to results and declared that they had better cure rates with the new doctrines than with traditional methods. It is futile to criticize the theory if the practical results are effective. The proper question was not, How could this silly doctrine possibly be effective? but rather, Did this mode of treatment actually have any effect?

At this point, the question of validity of evidence takes on supreme importance. There was growing appreciation of the need for controls. Oliver Wendell Holmes had studied in Paris with Pierre Louis, who had introduced the "numerical method"—an elementary form of statistics. Also receiving attention was the question of whether cases that improved under homeopathic treatment were comparable with the cases that the allopaths had treated. Occasional writers critically examined the assertions of "cure" and questioned the validity of the assertions.

Such questioning, of course, was a double-edged weapon, for it applied to the claims of regular physicians as well as to the homeopaths. In 1835, Jacob Bigelow had emphasized the need for careful scrutiny of evidence. He declared, "We are seldom justified in concluding that our remedies have promoted the cure of a disease, until we know that cases exactly similar in time, place, and circumstances, have failed to do equally well under the omission of those remedies; and such cases, moreover, must exist in sufficient numbers to justify the admission of a general law."[6]

This concern with proof and validity led eventually to a greater awareness of scientific method, an awareness that affected regular medicine as well as cults. To this problem we will return in a later installment.

The homeopaths, paying little attention to criticism, continued to increase in numbers and to extend their influence. They were making progress among the well-to-do and better educated laity. In 1846, an editorial in the *Boston Medical and Surgical Journal*[7] declared, "The homeopathic physicians pocket a far larger income for their little medicated pills, than any other class of practitioners in the country." The number and virulence of the attacks on the homeopaths bore witness to the concern that the regular profession was feeling.

In 1844 the homeopaths had founded a national medical society, the American Institute of Homeopathy, which antedated the AMA. As one of their goals they wanted to restrain "Physicians from pretending to be competent to practice Homeopathy who have not studied it in a skilful manner."[8] The homeopaths were trying to preserve standards of practice, and to protect themselves from "pretenders" who were not qualified. At the same time, they tried to establish homeopathic medical schools, duly chartered, that could train students in homeopathic medicine, thus eliminating any dependence on regular schools of medicine to furnish new devotees.

The homeopaths could increase their ranks by making converts from the regular physicians, or by accepting apprentices, or by establishing formal medical schools. In 1836 an abortive school was founded in Pennsylvania, but it soon went out of business. The first successful school was chartered in 1848. By that time the AMA had been established and the conflict of the regular physicians and the homeopaths had been formalized. We must now proceed to the formation of the AMA, the subject of the next essay.

Bibliographical Note

For further reading, the following major sources will be found helpful: James Harvey Young, *The Toadstool Millionaires* (Princeton, NJ, The Princeton University Press, 1974); William G. Rothstein, *American Physicians in the 19th Century* (Baltimore, The Johns Hopkins University Press, 1972); Joseph H. Kett, *The Formation of the American Medical Profession* (Westport, Conn, Greenwood Press, 1968); Martin Kaufman, *Homeopathy in America* (Baltimore, The Johns Hopkins Press, 1971); Lester S. King, *The Medical World of the 18th Century* (Chicago, University of Chicago Press, 1968).

For the quotations in the text the specific references are (1) Alex Berman, "The Thomsonian Movement and Its Relations to American Pharmacy and Medicine," *Bull Hist Med* 1951;25:520-528; (2) quoted in King, *Medical World*, p 164; (3) *Am J Med Sci* 1830;7:467-488; (4) *Boston Med Surg J* 1841;24:97; (5) *Ibid*, 1843;28:396; (6) Jacob Bigelow, "On Self-limited Diseases," in *Nature in Disease*, Boston, Ticknor & Fields, 1844, pp 28-29 (an essay delivered before the Massachusetts Medical Society in May, 1835); (7) *Boston Med Surg J* 1846;34:364; (8) quoted in Kaufman, *Homeopathy*, p 55.

IV. The Founding of the American Medical Association

Lester S. King, MD

A medical society is not a philanthropic or altruistic organization. It exists for the sake of its members, help them gain certain benefits. Societies come into stence when a group of individuals, having aims in nmon, feel that they can achieve their aims more idily by joint action than by individual effort. If other mbers of the community also benefit, this will be a plus lue that will promote general goodwill and induce more dy acceptance of the society's goals.

The American Medical Association, whose origins are ll documented, is a prime example of this total process. its birth in 1846 (under a different name), the reasons its existence were clearly stated: "*Resolved*, That it is pedient for the Medical Profession of the United States, institute a *National Medical Association*, for the otection of their interests, for the maintenance of their nour and respectability, for the advancement of their owledge, and the extension of their usefulness."[1] To derstand the origins of the AMA, we must understand e terms of this resolution and the factors that led up to

The enumerated goals fall into two clearly separable oups: the first bears directly on the welfare of the ysician—promoting his interests, honor, and respect- ility; the second has a broader application—the vancement of knowledge and extension of usefulness. ese aid the community as well as the physician, since he n thus offer better service.

The National Medical Association, later the AMA, came o being not in a vacuum but in response to urgent needs at, in turn, reflected the whole environment in which dicine found itself. This environment, however, had en undergoing continuous change, and without the areness of these changes the actual events of 1846 and 47 are rather meaningless.

The national association developed naturally out of the numerous state and local medical societies that had been founded over the preceding decades. In the formation of such local groups, a major impetus was the need to protect the trained practitioner from the competition of the untrained, the empirics, and the quacks. The local societies could exert pressure on legislatures for measures that would restrict competition. A society as a pressure group, seeking restrictive legislation, is a time-honored manifestation of the guild spirit. In the first decades of the 19th century, the moves toward the licensing of practitioners, with resulting monopolistic benefits, were reasonably successful, although different parts of the country offered different responses.

The medical profession could readily unite their opposition to quacks and pretenders. Other groups, with different interests, exerted counterpressures to blunt any monopolistic trends and to allow greater freedom in matters of health. In part, these counterpressures were formalized through well-organized sects, as we found last month in the discussion of Thomsonianism. But in large part the objections reflected the general climate of opinion in the Jacksonian era, a diffuse popular reaction against monopoly, a reaction indefinite but powerful and widespread.

Until the later 1830s, the state societies in the aggregate enjoyed a modest success against the quacks and pretenders. The physicians could work together against a common foe. However, new internal strains were developing *within* the medical profession, and by the 1840s threatened a polarization. Physicians might agree that only a "regular" training fitted a man to practice medicine, and, furthermore, that the right to practice should be formalized with a license. But then the question arose, who would control the granting of the licenses?

This problem, more acute in some states than in others, reflected the changes in medical education that were developing over a 30- to 40-year period. Originally, when medical schools were few and training took place through

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the apprenticeship, license examinations were conducted by county societies, whose membership represented the medical establishment. The societies appointed censors who examined the candidates. However, as already noted, medical school graduates enjoyed special privileges, specifically, that their diplomas exempted them from examination—they could legitimately practice merely by registering their diploma. Here we have a threat to the establishment, and the growth of a potential new power within the profession.

Some available statistics tell an interesting story. In 1800, when the country had five medical schools, only 20 men had received the MD degree, while for the quinquennium 1796 to 1800 the total number had been only 80. By 1849, when there were some 38 active medical schools, the total number of graduates was about 1,370.[2] We also want to know how many practitioners qualified by examination. Overall statistics are not available, but fairly reliable data exist for New York State. In 1820, thirty-eight students received the MD degree from medical schools in the state, while "three times that number were examined and licensed by censors of the state and county societies." In 1830, the comparable figures were 56 medical degrees and about 117 licensed by examination. The proportion was changing, but only slowly. By 1846, however, there was a marked reversal, with 246 graduates from schools within the state and only eight or ten licensed through examination.[3] Coventry[4] offered slightly different figures for 1845 and 1846. According to his data, the graduates of medical colleges in the state "averaged" 225, while those who took the examination numbered only 13 and 18, respectively.[4] The county medical societies, which originally determined the fitness to practice, were clearly being shorn of the power so to do. This change in power structure was producing tensions, and the loss of licensing fees, which went to the examiners, was also a factor in producing dissatisfaction among society members.

It would seem that too many persons were practicing medicine. The total number of practitioners could be divided into two groups: the "regular" physicians who followed the long-standing medical traditions, and the "irregulars" who included the empirics, sectarians, and quacks. Were there, in fact, too many practitioners of all types? The regulars would say yes, and would remedy the trouble by eliminating all the irregulars. The latter, however, would say no, and to a large extent the general public agreed with them. Presumably, legislation reflects the popular will. The legislatures of the several states had granted only limited privileges to the regular physicians, and, furthermore, through the second quarter of the century, these privileges were gradually being eroded. Equality was being extended to the irregular practitioners.

Were there too many *regular* physicians? One faction, the better trained and the more conservative, maintained the affirmative, claiming an excess of poorly trained physicians. If the standards of medical education would be sharply raised, this would reduce the number of men entering the medical schools and, consequently, the number who would enter practice. On the other hand, a small but powerful group of educators, who had founded duly chartered medical schools and derived financial support therefrom, wanted to increase the number of medical students and, hence, the eventual number of practicing physicians. This opposition between these two factions, who united in opposing the irregulars, caused great difficulty in the new organization.

These differences within the regular medical profession gradually strengthened the concept of elitism that ever since the time of John Morgan had never lain far below the surface. In the turmoil of the late 1840s, this trend showed itself more and more and became a dominant factor later in the century.

All the problems varied in intensity among the several states, and each state, taking account of its own environmental and social circumstances, attempted its own remedies. But the powers of the states were too localized, and the problems too complex. The inability of any single state society to deal competently with them soon became apparent to the more farsighted physicians. Over a period of 20 years, from about 1826, there were many efforts by one or another state society to get some cooperation from other states. These earlier efforts to form some sort of national medical society, excellently summarized by Stookey,[5] all proved abortive. There is no need to repeat here the story of these numerous frustrated attempts.

Cooperation had never been a prominent American trait, for "rugged individualism" more nearly expressed the American character. The earlier attempts at a national organization, in Vermont, New York, Georgia, Ohio, and New Hampshire, all came to naught. The historian naturally asks the question, Why did the earlier attempts to achieve some sort of joint cooperation all fail, until the final success of 1845-1846? The answer, I suggest, lay in an overall worsening of the situation that by 1844 had come to a climax. In that year, as we have seen, any special legal privileges enjoyed by the medical profession were generally withdrawn, and the era of "free trade" in medicine had begun.

For some authors, the founding of the AMA represents primarily a reform movement in medical education. This view stems largely from the aggressive rhetoric of Nathan Smith Davis, the "father of the AMA," whose narrative account is important source material for the period. Davis himself was especially interested in education, and he strongly emphasized the need for improved standards. The question of educational reform, however, must be placed in a broader perspective that will take account of the complexities of the situations.

The AMA came into existence under the impetus provided by the New York State Medical Society, which had been severely shaken by the legislative events of 1844. The legislature, influenced by the Thomsonians and by a populist tide, had revoked the special privileges of the regular medical profession. Although the medical license remained available, it lost all force and meaning. Anyone could practice, even without a license, and could collect any debts stemming from such practice. Free trade in medicine became a fact of life in New York (and, actually, in the rest of the country as well). The immediate reaction of the regular physicians in New York gives us a rare insight into the "embryology" of the AMA and the

ıy that physicians perceived the changing functions of a ədical society.

The new legislation was passed in May 1844. In June 44, the Albany County Medical Society, in a special eeting, heard a report that analyzed the situation and commended the course the society should take. The port[4] first gave a version of the way the societies came to existence. Originally, the county society provided a eans whereby the members "may readily be recognized each other and by the public, may exercise a general pervision over each other, and cooperate to promote the mmon welfare." A student, after being taught "the ience and art of Medicine" and passing the examination, "admitted into the profession as one worthy of its ɔnors and fitted to assume its duties." The society was a ɔdy of physicians "presenting certain guarantees of pacity and character . . . so that its members may be adily recognized by the public."

The law had thus recognized "educated physicians" and ıve the public "the means of recognizing them." Supɔsedly, it was the height of absurdity for anyone to ɔnsult "an ignorant person when it is possible to procure ıe services of an educated physician." Nevertheless, some ərsons did commit this absurdity, and to protect the ıblic from such "folly," the law prohibited irregular actice, under penalties. It had seemed proper to protect ı few silly persons" from "their own bad judgment."

But, the report continued, "a large portion of the public ıink that education and science are not necessary to ıalify men for medical practice." Numerous sects sprang ɔ that attracted a substantial public following. The ıthors modestly admitted that "we have not . . . the right ɔ impose on them [the public] our ideas of wisdom"—if ıyone who knows the facts is foolish enough to consult ith quacks, he must suffer the consequences. Furtherıore, the authors admitted, restrictive legislation was ard to enforce. It created a "cry of persecution," and ıight seem to place the medical profession in a false ɔsition, as if selfishly fighting for its own privileges ıther than "defending the public against their own ıshness and folly." The authors did not want to engage in ɔntroversy with special sects, "with ignoble adverıaries."

Regarding the laws of 1844, the proper response of the ıedical society was not to seek restoration of privileges, ut rather to put its house in order. "We ought to ndeavor to infuse more spirit into our county societies, to ave more frequent meetings, and to promote cordiality of eeling among the members. The rules of medical ethics hould be scrupulously observed." Now that the law was hanged, "it will be practicable to raise the standard of dmission into the County Societies . . . into which those ho find the requirements too high need not enter. . . . The ignity and respectability of our profession is to be romoted not by asking for legal privileges, but by an ıcrease of individual zeal and a more cordial cooperaion." The barrier that separates the physician from the uacks is formed, not by legislation, but "by the high ttainments and honorable deportment" of the physicians, nd it is this barrier that "depends on us to make higher nd stronger."

The report ended with a resolution, that "it would not be conducive to the interest or respectability of the medical profession" to seek any remedial legislation on "any medical subject whatsoever." The report and the resolution were unanimously adopted. The society seemed willing to stand by itself, without legislative help.

The whole report shows a remarkable mixture of resignation to the course of events, bitterness over what has transpired, and continued arrogance. Equally important, it showed a sensible recognition that the future can be salvaged through revitalizing the medical societies, and raising their standards and their level of discipline. Yet, at that time, the members of the county society did not look further than their own local society.

I suggest that after the initial shock had passed, men of greater vision looked to a broader scene. They could perceive an overall solution through a national rather than a local society.

In 1839, the New York State Medical Society had passed a resolution recommending a meeting of nationwide delegates, three from each state medical society and one from each regularly constituted medical school. Although invitations had been sent out, no one responded and no meeting took place. In 1844, at the state society meeting, the topic again came up for discussion, especially in reference to raising the standards of medical education. Dr Davis, a newly appointed delegate, only 27 years old, had been deeply concerned with this aspect. The debate continued into the meeting of 1845. At that time a resolution was passed, urging the convocation of delegates from "medical societies and colleges in the whole Union,"[7] to meet in Philadelphia, in 1846, to consider the problem of elevating the standards of medical education. A committee was appointed to implement the resolution, with Dr Davis as chairman. A forceful and indefatigable correspondent, he, more than any other single person, deserves the credit for bringing the convention into existence.

Davis' own account of the convention emphasized quite exclusively the educational aspects and ignored other important facets. The indispensable document for studying the founding of AMA is the official *Proceedings* of the conventions of 1846 and 1847, containing the minutes and the committee reports. When we study these we gain a somewhat different perspective.

At the initial meeting on May 5, 1846, there was some difficulty in determining the status of the various persons who attended and just what they represented, but these problems were not of serious import. After the election of officers, a maverick resolution to adjourn the convention sine die was decisively rejected, and the delegates settled down to the main business. A committee, of which Davis had been the chairman, brought in six resolutions that were "adapted to fulfill the immediate objects contemplated by the Convention."[8]

The first resolution indicated the purpose of the Association, already quoted. The second proposed a committee to plan the organization of the next meeting, and the third proposed an invitation to all "regularly organized Medical Societies, and chartered Medical Schools" to attend the next meeting in Philadelphia, in 1847. The remaining resolutions have to do directly with the goals of the

Association and their implementation, and form the essence of the proceedings. Thus, the fourth resolution recommended a "uniform and elevated standard" for the MD degree; the fifth, "a suitable preliminary education" for all who would study medicine; and the sixth, a uniform code of medical ethics for the entire medical profession in the United States.

A further resolution, from the floor rather than the steering committee, recommended the separation of the teaching of medicine from the licensing to practice. This really meant that a diploma should not be an automatic license. Instead of multiple licensing bodies—local societies *and* medical facilities—there should be only a single licensing board for each state. This resolution engendered much debate but was finally referred to a committee. Other resolutions passed at the convention are not relevant for our purpose.

The president of the convention appointed committees to consider these various resolutions and to report at the next meeting in 1847. Dr Davis was appointed only to the committee on organization, and the final framework of the Association owes much to him and to his remarkable energy. However, he did not serve on any of the other committees that hammered out the doctrinal points. These committee reports, presented at the 1847 meeting, embody the representative thinking of the convention.

To appreciate the problems of the convention, we must recognize the essential guild structure, comparable to the British guilds such as the Royal College of Physicians or the Society of Apothecaries. Obviously, the overall environment in the United States in the 1840s differed markedly from that of Great Britain a century earlier. The goals, however, have much in common and include some basic components of all guild structures.

At the same time there was an important difference. Traditionally, a guild, in promoting the interest of its members, tries to establish a monopoly through appropriate legislative action. In the United States of the 1840s, the social and political climates effectively prevented any hope that legislation would approve monopolistic privileges. However, there remained scope for a voluntary organization that could promote the interests of its members through other than special legal privileges. For effectiveness, such an organization would depend on many factors, but the two most important elements come directly from essential and traditional guild practice: first, the control over apprentices (ie, over those who would want to enter the guild); and second, a disciplinary control over those who were already in.

The concept of apprenticeship, for a long time traditional in American medicine, had by the mid-19th century been largely superseded by newer modes of medical education. A medical guild had to maintain standards, and this it could do, over the long run, only by controlling the entrance into the profession. If a centralized voluntary association wanted to control new admissions into the cadre of practicing physicians, there would need to be an agreement between medical societies and medical faculties. As we have already seen, there was considerable tension between these groups.

A guild would also need to exert control over those members who had finished their training and were actually engaged in their profession. In classical guild terminology, this would include all who had finished their apprenticeship to become journeymen or masters. The code of professional ethics was an instrument of control—transgression of the code would permit expulsion of the erring member from the guild.

The code, a weapon for keeping members in line and maintaining discipline, gave rise to a vast array of problems that will be treated later. For the present, we must rest with this formulation: We have a voluntary organization designed to further the interests of the medical profession (with subsidiary benefits overflowing to the general public); a firm organization was needed to pursue its goals; such a pursuit required a control over admission to the profession and control over the members already in practice—this would be accomplished by regulating medical education and establishing a code of ethics; and, furthermore, a voluntary organization must rely on itself and on public opinion, and not on specific legislative support. This interpretation is, of course, ex post facto, derived entirely by inference from the documents of the period and the whole course of events. The course of events proceeded as if these views were implicit at the time of the first convention, though they were not explicitly spelled out.

The convention of 1846 tried to face, squarely and honestly, the problems that affected the whole medical profession in the mid-1840s. The key to these problems (and the proposed solutions) lies in the committee reports, presented and discussed at the 1847 meeting and adopted as the framework for the AMA. I need not enter into the parliamentary aspects of the convention, nor the change in title from National to American Medical Association, that took place at the end of the 1847 meetings. I will restrict my analysis to three topics—the impact of the code of medical ethics, the problems of medical education, and the concept of elitism. We will see how these topics affected the course of the AMA throughout the entire 19th century.

In the next essay, I will take up the subject of medical ethics, so-called, and its effect on the medical profession.

Bibliographic Note

The most readily available account of the founding of the AMA is Morris Fishbein's *History of the American Medical Association, 1847-1947* (Philadelphia, WB Saunders Co, 1947). For more detailed discussion of special aspects, with abundant references, two helpful texts are Martin Kaufman's *Homeopathy in America* (Baltimore, The Johns Hopkins University Press, 1968) and William G. Rothstein's *American Physicians in the Nineteenth Century* (Baltimore, The Johns Hopkins University Press, 1972). An essential primary source is *The Proceedings of the National Medical Conventions held in New York, May, 1846, and in Philadelphia, May 1847*. Philadelphia, printed for the American Medical Association, 1847. Of great value is N. S. Davis' *History of the American Medical Association From its Organization up to January, 1855* (Philadelphia, Lippincott Grambo & Co, 1855).

For the quotations in the text the specific references are (1) *Proceedings of the National Medical Convention*, p 17. (2) *Transactions of the American Medical Association* 1849;2:299. (3) N. S. Davis, *History of Medical Education and Institutions in the United States*, Chicago, SC Griggs & Co, 1851, pp 116-117. (4) Charles B. Coventry, "Remarks on Some of the Proceedings of the New York State Medical Society," *New York Journal of Medicine* 1846;7:192-199. (5) Byron Stookey, "Origins of the First National Medical Convention, 1826-1846," *JAMA* 1961;177:133-140. (6) *New York Journal of Medicine* 1844;3:281-286. (7) Davis, *History of the AMA*, p 23. (8) The remaining quotations come from the *Proceedings*, pp 16-22.